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REMARKS**A. Overview**

Claims 1-46 are pending in the present application. Allowable subject matter has been identified in the application. The present response is an earnest effort to place the application in allowable form. Reconsideration is respectfully requested based on the following remarks.

B. Allowed Claims

The finding of allowability of claims 37-46 is gratefully acknowledged, as is the finding that claims 2-4, 7-32 and 33-36 would be allowable if appropriately rewritten.

C. § 102(b) Rejection

Four claims have been rejected in the application. Independent claims 1 and 32, and dependent claims 5 and 6, have been rejected as anticipated by Kurosawa, U. S. Patent No. 4,854,477. Kurosawa has been thoroughly reviewed and the rejection of these four claims is respectfully traversed for the following reasons.

Kurosawa is directed to a vending machine dispensing mechanism that utilizes a rotatable semi-circular disk 17 which determines whether pivotable flappers 121 are maintained horizontal, or allowed to fold down to release the lower most of a vertical stack of dispensable items. The focus of Kurosawa is how to free a product that gets stuck.

As described in the Kurosawa Abstract of Disclosure, its Summary of the Invention at column 2, lines 4-23, and in its Detailed Description of the Preferred Embodiment (at especially columns 4-8), freeing a stuck product is accomplished by sensing whether the rotatable disk is in certain positions at certain times. This is done by sensing the rotational position of the motor drive shaft which turns the rotatable disk. If not, the system assumes a product is stuck. It then

reverses the rotation of the disk a certain angular amount and returns the disk to again attempt to bring it back to a home position.

The example given in the Specification is as follows. If a product is lodged such that a flapper that rides on top of the rotatable semi-circular disk is also lodged, when the disk tries to lift the lodged flapper back to horizontal, it may not have sufficient torque to do so and thus the disk stops rotating. If a sensor on the motor does not sense that the disk has returned to home within a certain period, it automatically reverses rotation of the disk. This tries to release mechanical force on the lodged flapper to give the product a chance to dislodge --which would also free the flapper (compare the lodged flapper of Figure 7 with the free flapper of Figure 3). If the product remains lodged such that the lodged flapper does not allow the disk to rotate back to home a second time, Kurosawa repeats the attempt to free the lodged product a predetermined number of times. If not successful after the predetermined number of attempts, the dispensing mechanism can be shut down and an error signal activated.

This method is discussed at Kurosawa column 7, lines 45-55:

"As mentioned above, if a hanging or stuck condition is detected, the motor control device temporarily stops the operation of the motor and then reversely drives the motor to clear the discharge opening by freeing one of the flappers from restriction by the control plate. Therefore, even if the dispensing article is stuck between the flapper and the side wall of the article storage area, the article has a chance to release itself. Also, the operation of the motor is totally ceased and the trouble of the dispensing mechanism is indicated after rotation of the motor has been reversed several times."

Thus, Kurosawa depends upon (a) a sensor of the rotational position of the drive shaft of the motor and (b) timers that are instigated pursuant to the timing regiment of Figure 10.

In direct contrast, Applicant's claimed invention takes a much different approach. It relies on a sensor which monitors whether a vendible product itself has dropped during a first vend

cycle. This requires some sort of literal product sensor to positively confirm whether or not a product has been sensed by looking to see whether a product has moved or dropped. It is not dependent on rotational position of the drive shaft of any motor.

As can be seen in Applicant's claim 1, element b) requires "monitoring whether a product is sensed during a first vend cycle".

Applicant's independent claim 32 has the limitation "d) a product sensor in communication with the controller and located between the dispensing unit and a customer access location in the vending machine". The claim goes on to require "if the product sensor indicates a product dispensation during the first vend cycle, operate the motor to home". The limitation requires sensing a product not a drive shaft.

Kurosawa simply does not have any product sensor. Again, it makes an assumption that a product is lodged only if rotational position of its motor shaft does not return home within a certain time period. Therefore, if for any reason that condition does not occur, it assumes a product is stuck. It also does not initiate a second vend cycle (as required by Applicant's claims) but rather reverses the motor to try to release a stuck product. It teaches nothing about initiating a second vend cycle.

A specific example helps illustrate the difference. As explained in Applicant's Specification, there are times when a dispensing mechanism is operated but does not accomplish dispensation. For example, with a helical drive element (such as referenced in Applicant's exemplary embodiment), the product may be moved to the edge of a tray but not off the edge. As claimed, Applicant's invention utilizes a product sensor that looks to see whether the product is dispensed. It is not looking at the helical drive element, or the drive shaft of the motor that drives the helical drive element, or its position to determine this. It senses whether a product

has dispensed. If a product is sensed, in Applicant's method and apparatus the motor is operated to move to a home position. If a product is not sensed, Applicant's method and apparatus simply starts a new (a second) vend cycle. Thus, it is possible there would be times when Applicant's claimed invention dispenses two products. But as explained with Applicant's disclosure, there are times when this is preferred over the risk of having an unsuccessful dispensation and an unhappy customer.

In contrast, upon initiation of a first vend cycle, Kurosawa starts a timer. If its motor returns to home within a certain time period, it is ready for a second vend cycle (but it does not initiate a second vend cycle). If its motor does not return to home position within a certain time period, it reverses the motor and then attempts again to move to home. This is not a second vend cycle but rather a reversal and retry of the first vend cycle. Nothing is dependent on any product sensor. Kurosawa suggests nothing of trying to vend a second product.

It is therefore respectfully submitted that Kurosawa does not provide a *prima facie* case of anticipation of Applicant's independent claims 1 and 32. It does not disclose, expressly or inherently, all the critical elements of Applicant's claimed invention, in the arrangement of the claim. As stated, it at least does not disclose any "product sensor", as required by claims 1 and 32. It also does not disclose initiating a second vend cycle if the product is not sensed during a first vend cycle and then monitoring whether a product is sensed during the second vend cycle, as required by Applicant's claim 1. Kurosawa furthermore does not disclose a controller and helical product holder as required by element b) of Applicant's claim 32. Kurosawa is limited to the specific semi-circular rotatable disk and hinged flapper arrangement, as opposed to any spiral or helical dispensing mechanism.

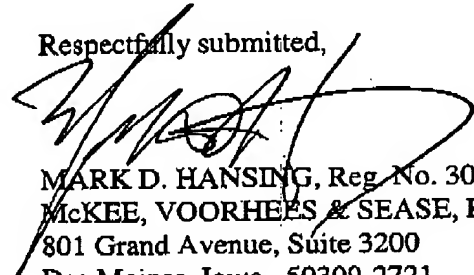
It is therefore respectfully submitted that Applicant's claims 1 and 32 are also allowable over the cited reference, and that claims 5 and 6, depending from claim 1, are not anticipated by Kurosawa for the same reasons expressed in support of claim 1.

D. Conclusion

It is respectfully submitted that all matters raised in the Office Action have been addressed and remedied and that the application is in form for allowance.

No fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Respectfully submitted,



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